LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A non-contact passive medical scanning imager for imaging subcutaneous body temperature comprising:

a detector ~~for sensing~~ configured to sense millimeter wave electromagnetic radiation;

a collector ~~for collecting~~ configured to collect radiation emitted from a patient and directing that radiation along a collection path to the detector in such a manner that the collected radiation has a defined sensitivity profile across and along substantially the entire length of the collection path;

~~scanning~~ means for ~~causing a scan of~~ scanning a target area of the patient, and

isolation means in the path of the collected radiation for preventing signal leakage from the detector being emitted towards the patient's body.

2. (Previously Presented) An imager as claimed in claim 1, wherein the collector comprises a corrugated feedhorn.

3. (Currently Amended) An imager as claimed in claim 1, wherein the collector comprises a waveguide ~~for supplying~~ configured to supply radiation to the detector.

4. (Currently Amended) An imager as claimed in claim 1, wherein the collector ~~is such that~~ collects the collected radiation ~~has~~ having a Gaussian sensitivity profile.

5. (Currently Amended) An imager as claimed in claim 2, wherein the feedhorn is ~~arranged~~ configured to convert a fundamental Gaussian mode beam of radiation into a waveguide mode in which radiation propagates through a wave guide to the detector.

6. (Currently Amended) An imager as claimed in claim 1 wherein the collector ~~is such that~~ collects the collected radiation ~~has~~ having a Bessel sensitivity profile.

7. (Currently Amended) An imager as claimed in claim 6 including an axicon in the path of the collected radiation and configured to convert ~~the Bessel~~ a Gaussian sensitivity profile of the collected radiation to ~~a Gaussian~~ the Bessel sensitivity profile.

8. (Currently Amended) An imager as claimed in claim 1 wherein the collector includes ~~focusing~~ means for focusing.

9. (Currently Amended) An imager as claimed in claim 1, wherein the scanning means ~~are~~ is operable to repeatedly sweep the collection path through 360°.

10. (Currently Amended) An imager as claimed in claim 9, wherein the scanning means ~~comprise~~ comprises a deflector that is rotatable about one axis to scan the collection path in a scanning direction across a body.

11. (Currently Amended) An imager as claimed in claim 10 further comprising a support that facilitates controlled line-indexing ~~means~~ for moving the collection path in a direction perpendicular to the scanning direction.

12. (Currently Amended) An imager as claimed in claim 11, wherein the ~~indexing means~~ support is operable to swing the deflector about a second axis perpendicular to the ~~first~~ one axis.

13. (Previously Presented) An imager as claimed in claim 1, wherein the imager is operable to form an image from emitted radiation in the frequency range of 90-100GHz.

14. (Currently Amended) An imager as claimed in claim 1, further comprising at least one calibration load for emitting millimeter wave radiation at a pre-determined intensity, the ~~imager~~ collector being operable to direct said radiation to the detector to enable the imager to be calibrated.

15. (Currently Amended) An imager as claimed in claim 14, wherein the calibration load is provided in the ~~scanning~~ collection path of the imager, so that the imager can be calibrated for each pass of the collector.

16. (Currently Amended) An imager as claimed in claim 14, wherein the at least one calibration load comprises two calibration loads ~~are provided, together with~~, further comprising means for maintaining ~~them~~ the two calibration loads at different temperatures, the temperatures straddling ~~the~~ a range of subcutaneous body temperatures to be imaged.

17. (Previously Presented) An imager as claimed in claim 1 wherein the detector is linearly polarized.

18. (Currently Amended) An imager as claimed in claim 17 further including polarization means for altering the polarization of received radiation ~~so as~~ to ~~align~~ be aligned with the polarization of the detector.

19. (Previously Presented) An imager as claimed in claim 1 wherein the scanning means scans the target area of the patient such that the collection path is in the form of a circumference of a notional cylinder at each of a plurality of indexed steps.

20. (Currently Amended) An imager as claimed in claim 1 wherein a ~~given~~ spot on the collection path resides on a focal plane of the scanning means, such that the sensitivity profile is symmetrical and reduced about the ~~given~~ spot along the collection path.

21. (Currently Amended) An imager as claimed in claim 1 wherein the defined sensitivity profile ~~of the collection path~~ is non-uniform across and along the collection path based on known changes in a location of a focal spot of the scanning means along the collection path.

22. (Previously Presented) An imager as claimed in claim 1, wherein the isolation means comprises a quasi-optical isolator.

23. (New) An imager as claimed in claim 1, further comprising a computer configured to display an image associated with data of the collected radiation corresponding to the subcutaneous body temperature of the patient.